RESOLUTION NO. 2007-77

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWPORT BEACH SETTING FORTH FINDINGS BASED ON LOCAL CONDITIONS WITHIN THE CITY OF NEWPORT BEACH WHICH MAKE CERTAIN MODIFICATIONS AND CHANGES TO THE CALIFORNIA BUILDING CODE, AND THE CALIFORNIA PLUMBING CODE REASONABLY NECESSARY.

WHEREAS, Health & Safety Code Section 17958 mandates that the City of Newport Beach adopt ordinances or regulations imposing the same requirements as are contained in the regulations adopted by the State pursuant to Health & Safety Code, Section 17922; and

WHEREAS, the State of California is mandated by Health & Safety Code Section 17922 to impose the same requirements as are contained in the 2007 California Building Code based on the 2006 International Building Code of the International Code Council, the 2007 California Plumbing Code based on the 2006 Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials, and the 2007 California Electrical Code based on the 2005 National Electrical Code of the National Fire Protection Association (hereinafter referred to collectively as "Codes"); and

WHEREAS, Health & Safety Code Section 17958.5(a) permits the City to make such changes or modifications to the Codes that are reasonably necessary because of local climatic, geographic or topographic conditions; and

WHEREAS, Health & Safety Code Section 17958.7 requires that the City Council, before making any changes or modifications pursuant to Section 17958.5 make express findings that such changes or modifications are needed due to climatic, geographic, or topographic conditions; and

WHEREAS, the Building Director has recommended that changes and modifications be made to the codes and have advised that these changes and modifications to the model codes are reasonably necessary due to local conditions in the City of Newport Beach and have further advised that the remainder of said changes and modifications are administrative or procedural in nature,

NOW THEREFORE, BE IT RESOLVED by City Council of the City of Newport Beach as follows:

SECTION 1. Life and Fire Safety

The following changes and modifications to the 2007 Editions of the CALIFORNIA BUILDING CODE as recommended by the Building Director are hereby found to be necessary due to local climatic, geographical or topographical conditions:

1. Newport Beach Municipal Code 15.04.020, California Building Code Section 202 redefines the height of the top level in high rise buildings from 75 ft. to 40 ft. and modifies the application of special provisions for these buildings to all occupancies from office and residential occupancies.

2. Newport Beach Municipal Code 15.04.030, California Building Code Section 403.1 limits the high rise building requirements to fire sprinkler and fire alarm only for structures with the top level between 40 ft. and 55 ft. high.

3. Newport Beach Municipal Code Sections 15.04.040 through 15.04.180, California Building Code Chapter 7A (Materials and Construction Methods for Exterior Wildfire Exposure) was amended to provide fire-resistive construction requirements on parcels adjacent to very high fire hazard severity zones within the City of Newport Beach. These amendments provide fire protection requirements which are equal to those previously adopted into Section 428 of the 2001 California Building Code.

4. Newport Beach Municipal Code Sections 15.04.180 through 15.04.280 amended sections of Chapter 9 of the California Building Code to require a fire sprinkler system in new structures with an area exceeding 5,000 square ft. and significant additions to existing structures that will increase the area to more than 5,000 square ft. These amendments provide fire protection requirements which are

equal to those previously adopted into Chapter 9 of the 2001 California Building Code.

5. Newport Beach Municipal Code Sections 15.04.290 through 15.04.310 amended sections of Chapter 15 of the California Building Code to provide Class A roof assembly for new and reconstructed buildings of all types of construction.

FINDINGS:

a. The City of Newport Beach is located in an area subject to a climatic condition of high winds. This environment is conducive to rapidly spreading fires. Control of such fires requires rapid response. Obstacles generated by a strong wind, such as fallen trees, street lights and utility poles, and the requirement to climb 75 ft. vertically up flights of stairs will greatly impact the response time to reach an incident scene. Additionally the amount of wind force at 60 ft. above the ground makes use of aerial type fire fighting apparatus above this height or rescue personnel at increased risk of injury.

b. The City of Newport Beach is located in a seismically active area. The viability of the public water system would be questionable at best after a major seismic event. This would leave tall buildings vulnerable to uncontrolled fires due to a lack of available water and an inability to pump sufficient quantities of available water to floors above the 40 ft. level. A severe seismic event has the potential to negatively impact any rescue or fire suppression activities because it is likely to create obstacles similar to those indicated under the high wind section above. With the probability of strong aftershocks there exists a need to provide increased protection for anyone on upper floors.

c. Due to the geographic conditions of widespread development separated by waterways and the street congestion caused by local geography, and due to the seismic activity and the expected infrastructure damage inherent in a seismic hazard zone, it is prudent to rely on automatic fire sprinkler systems to mitigate extended Fire Department response time and keep fires manageable with reduced fire flow (water) requirement for a given structure.

d. Many areas of Newport Beach have significant growths of vegetation of a highly combustible nature.

e. The City of Newport Beach, especially the foothill areas, is geographically located in an area periodically subject to wind conditions of high velocity. Moreover, the topographical conditions of the foothill areas and canyons contained therein tend to accelerate the periodic high velocity winds by means of a venturi effect.

f. The City of Newport Beach, especially the foothill areas, is located within an area subject to high temperatures, in conjunction with high Santa Ana winds.

g. The use of non-rated or special purpose roofing materials as roof coverings within the City of Newport Beach may create an inordinate fire hazard during periods of high velocity winds when fire may spread across buildings with roof coverings of non-rated combustible materials.

h. Embers from chimneys without spark arresters within the City of Newport Beach, including the foothill areas, coupled with the climatic, topographic and geographic conditions described herein above, may permit the throwing of sparks, embers and cinders upon non-rated and special purpose roofing material roofs during periods of high velocity winds, thereby creating a fire hazard which in turn may spread throughout areas where the roofs of structures are covered with untreated wood shakes and shingle.

SECTION 2. Structural Revisions

1. Newport Beach Municipal Code Section 15.04.320, CBC Section 1613.6.1 was amended to limit the depth of a cantilevered flexible diaphragm to less than that of a rigid diaphragm.

FINDINGS:

a. Section 2305.2.5 provides requirements for cantilevered rigid wood diaphragms. Rigid wood diaphragms are permitted to cantilever 25 ft., or two-thirds of the diaphragm width,

whichever is less. It is therefore proposed to delete the text regarding rigid diaphragm construction from this section of the 2007 California Building Code.

b. Flexible wood diaphragms supporting lateral-force-resisting elements above, and transmitting seismic loads to lateral-force-resisting elements below, performed poorly during the 1994 Northridge Earthquake as investigated by the Los Angeles City Task Force.

2. Newport Beach Municipal Code Section 15.04.330 added Section 1613.7 to the California Building Code to require lateral bracing for suspended ceilings, light fixtures and other suspended fixtures. These requirements replace requirements currently adopted in the Uniform Building Code Standards.

FINDINGS:

a. The 2007 California Building Code has no information regarding the design requirements for suspended ceiling systems for seismic loads. It is because of lessons learned from prior earthquakes, such as the Northridge Earthquake, that this amendment is proposed to minimize bodily injuries, and building damage within the spaces where these ceiling systems are installed.

3. Newport Beach Municipal Code Section 15.04.340 added Section 1614 to the California Building Code to limit exception 3 of ASCE 7 Section 12.2.3.1 to one- and two-story dwellings. California Building Code Section 1614.1.3 was added to correct the building drift formula in ASCE 7 by adding the occupancy importance factor. Also requirement for seismic separation of buildings from each other and from the property line was added.

FINDINGS:

a. Newport Beach is in an active seismic area. Observed damage to one- and two-family dwellings of light frame construction after the Northridge Earthquake may have been partially attributed to vertical irregularities common to this type of occupancy and construction. In an effort to improve quality of construction and incorporate lessons learned from studies after the Northridge Earthquake, the proposed modification to ASCE 7 to limit the number of stories of the

excepted structures to two will significantly minimize the impact of vertical irregularities and concentration of inelastic behavior from mixed structural systems.

b. Section 12.12.3 of ASCE 7-05, including Supplement No. 1, does not provide requirements for separation distances between adjacent buildings. Requirements for separation distances between adjacent buildings, not structurally connected, were included in previous editions of the IBC and UBC. However, when ASCE 7-05 was adopted by reference for IBC 2006, these requirements were omitted

4. Newport Beach Municipal Code Sections 15.04.360 through 15.04.390, California Building Code Sections 1704.4, 1709.1, 1709.2 and 1908.1.15 were amended to require special inspection for concrete footings with compressive strength exceeding 2,500 psi. Also requires the engineer of record to provide structural observation when structural observation is required. Also, ACI 318 Section 2210 was revised by deleting the option for unreinforced concrete basement walls in single-family dwellings and limited the projection of an unreinforced footing beyond the supported member to eliminate bending in the footing.

FINDINGS

a. The first two changes are administrative; the last change is needed due to the location of the City of Newport Beach in a seismically active area.

5. Newport Beach Municipal Code Sections 15.04.400 and 15.04.410, California Building Code Sections 2306.3.1 and 2306.4.1 were amended not to allow staples for fastening plywood to wood diaphragms or shear walls.

FINDINGS:

a. This proposal is in keeping with the current California Building Code Sections 2315.1 and 2315.3.3 which address nailed shear wall and diaphragm construction only.

b. Tabular allowable shear values for wood structural panel shear walls with staples are based on monotonic testing (one direction only such as occurs during a wind event). Tabular

allowable shear values for wood structural panel shear walls with nail fasteners have been compared with the results of various cyclic testing protocols (reversal of load direction and magnitude such as occurs during an earthquake) that substantiate the published values.

c. In September 2007, limited cyclic testing data was provided to the structural code committee for the LARUCP showing that stapled wood structural panels do not exhibit the same behavior as traditionally nailed wood structural panels. Additionally, the test results for the stapled wood structural shear panels appeared significantly lower in strength and demonstrated greater displacements than the nailed wood structural shear panel test results.

SECTION 3. Swimming Pool Safety Fencing.

1. Newport Beach Municipal Code Sections 15.04.420 and 15.04.430, California Building Code Sections 3109.4.1 and 3109.4.4.2 were amended to require property perimeter fencing for protection of the public and increased the barrier height from 48 inches to 60 inches.

FINDINGS:

a. This change is to provide a level of safety protection equal to the requirement contained in the current 2001 California Building Code. 2007 California Building Code Section 3109.4.4 permits local modifications to pool safety requirements.

SECTION 4 Plumbing, Water Supply Piping.

1. Newport Beach Municipal Code Sections 15.08.020 and 15.08.030 amended 2007 California Plumbing Code Table 6-4 to require PE piping is used for underground building water supply. As an alternate, metal piping can be sleeved when used for underground water supply.

FINDINGS:

a. The City of Newport Beach has many areas of hot soil which attacks underground metal pipe.

SECTION 5

A copy of this Resolution together with the Ordinances adopting the City Codes shall be filed with the California Building Standards Commission and the California Department of Housing and Community Development by the City Clerk of the City of Newport Beach as required by State law (Section 17958.7 H & S Code).

ADOPTED THIS _____ DAY OF _____, 2007

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MAYOR

ATTEST:

_____
City Clerk

Council\Resoltn.2007